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**SUPPLEMENT TO PROXY STATEMENT FOR THE 2020 ANNUAL MEETING OF
STOCKHOLDERS**

To be held on August 20, 2020

On August 3, 2020, Catalyst Pharmaceuticals, Inc. ("Catalyst") issued a press release announcing that, due to the continuing coronavirus (COVID-19) pandemic and out of concern for the health and safety of its stockholders and employees, the format for its 2020 Annual Meeting of Stockholders (the "Annual Meeting"), which will be held on **Thursday, August 20, 2020 at 9:00 AM eastern time**, has been changed to a virtual-only meeting format. There will be no in-person meeting.

On or about July 6, 2020, we mailed to our stockholders a detailed proxy statement (the "Proxy Statement") that contains information about each of the matters to be considered at the Annual Meeting. This Supplement to Proxy Statement ("Supplement") supplements the Proxy Statement and is being filed with the SEC and made available to stockholders on or about August 3, 2020. Except as described in this Supplement, none of the items or information presented in the Proxy Statement is affected by this Supplement. This Supplement does not provide all of the information that is important to your voting decisions at the Annual Meeting. The Proxy Statement contains other important additional information. We encourage you to carefully read this Supplement together with the Proxy Statement.

Information about the virtual Annual Meeting

Stockholders will be able to attend the Annual Meeting and submit questions and vote their shares during the Annual Meeting, from any location that has internet connectivity. Only stockholders of record at the close of business on June 22, 2020 ("Record Date") will be entitled to attend the virtual Annual Meeting. Any stockholder wishing to attend the virtual Annual Meeting should register for the meeting by August 19, 2020. To register for the Annual Meeting, stockholders should follow these instructions as applicable to the nature of their ownership of Catalyst's common stock:

- *Registered Stockholders.* If your shares are registered in your name with our transfer agent, Continental Stock Transfer & Trust Company ("Continental"), and you wish to attend the online-only virtual Annual Meeting, go to www.cstproxy.com/catalystpharma/2020, enter the control number you received on your proxy card (printed in the box and marked with an arrow) and click on the "*Click Here to Preregister for the Online Meeting*" link at the top of the page. Just prior to the start of the meeting you will need to log back into the meeting site using your control number. Pre-registration is recommended but is not required to attend.
- *Street Name Stockholders.* Street name stockholders who wish to attend the online-only virtual Annual Meeting must obtain a legal proxy by contacting their account representative at the bank, broker, or other nominee that holds their shares and email a copy (a legible photograph is sufficient) of their legal proxy to proxy@continentalstock.com. Street name stockholders who email a valid legal proxy will be issued a meeting control number that will allow them to register to attend and participate in the online-only Annual Meeting. After contacting Continental, a street name stockholder will receive an e-mail prior to the meeting with a link and instructions for entering the

virtual Annual Meeting. Street name stockholders should contact Continental at least five (5) business dates prior to the Annual Meeting date.

Stockholders participating in the virtual Annual Meeting will be in a listen-only mode and will not be able to speak during the webcast. However, in order to maintain the interactive nature of the virtual meeting, virtual attendees are able to: (i) vote using the online meeting website, and (ii) submit questions or comments to our officers during the meeting via e-mail or the virtual meeting webcast. Starting Monday, August 17, 2020 at 9:00 AM eastern time, stockholders may submit questions or comments before or during the meeting through the virtual meeting portal by typing in the "*Submit a Question*" box.

Stockholders will also have the option to call in to the virtual Annual Meeting by telephone and listen (in listen-only mode) by calling:

Within the U.S. and Canada	1-888-965-8995 (toll free)
Outside the U.S. and Canada	1-415-655-0243 (standard rates apply)
Passcode for telephone access:	09485747#

We encourage you to access the Annual Meeting 15 minutes prior to the start time. Online check-in will begin at 8:45 a.m. eastern time.

Further information about the matters to be considered at the meeting

At the Annual Meeting, stockholders will be asked to approve the following matters:

- Proposal No. 1, to elect six directors to serve until the 2021 annual meeting of stockholders or until their respective successors are duly elected and qualified or until their earlier death, resignation and removal;
- Proposal No. 2, to approve an amendment to our Certificate of Incorporation that will increase the number of authorized shares of our common stock from 150,000,000 shares to 200,000,000 shares;
- Proposal No. 3, to approve an amendment to our 2018 Stock Incentive Plan that will increase the shares available for issuance under the plan by an additional 2,500,000 shares (from 7,500,000 shares to 10,000,000 shares);
- Proposal No. 4, to ratify the extension of our Stockholders' Rights Plan until September 20, 2022 that was previously approved by our board of directors;
- Proposal No. 5, to approve, on an advisory basis, the 2019 compensation of our named executive officers, as set forth in the Proxy Statement; and
- Proposal No. 6, to ratify the selection of Grant Thornton LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2020.

The election of directors requires a majority of the votes cast by the holders of our common stock. A "majority" means the director must receive more votes "for" their election than "against" their election. Consequently, any shares not voted (whether by abstention, broker non-vote or otherwise) have no impact on the election of directors. All other matters, except for Proposal 2, to be considered for approval at the

Annual Meeting will require approval by a majority of the votes cast for and against such matter at the meeting. Proposal 2, to approve an Amendment to our Certificate of Incorporation that will increase the number of authorized shares of our common stock from 150,000,000 shares to 200,000,000 shares, will require the affirmative vote of a majority of the outstanding shares of our common stock.

If you are a beneficial owner of shares held in street name and you do not instruct your broker, bank or other agent how to vote your shares, your broker, bank or other agent may still be able to vote your shares in its discretion. In this regard, under the rules of the NASDAQ Stock Market, brokers, banks, and other securities intermediaries that are subject to NASDAQ rules may use their discretion to vote your "uninstructed" shares with respect to matters considered to be "routine" under NASDAQ rules, but not with respect to "non-routine" matters.

Proposal 1 (the election of directors), Proposal 3 (increase in shares available for issuance under the 2018 stock incentive plan), Proposal 4 (ratification of the extension of our stockholders' rights plan) and Proposal 5 (non-binding advisory vote to approve the 2019 compensation of our named executive officers) are considered non-routine matters under applicable rules of the NASDAQ Stock Market. A broker or other nominee cannot vote without instructions on non-routine matters, and therefore there may be broker non-votes on Proposals 1, 3, 4 and 5. Proposal 2 (amendment of our Certificate of Incorporation) and Proposal 6 (ratification of the appointment of Grant Thornton LLP as our independent registered public accounting firm for the year ending December 31, 2020) are considered routine under applicable NASDAQ Stock Market rules. A broker or other nominee may generally vote on routine matters, and therefore no broker non-votes are expected to exist in connection with Proposals 2 and 6.

As such, if you are a beneficial owner of shares held in street name, and you do not submit a proxy or attend the Annual Meeting and vote, your shares may be voted by your broker in its discretion on Proposals 2 and 6. If you are a beneficial owner of shares held in street name, in order to ensure your shares are voted in the way you prefer, you must provide voting instructions to your broker, bank or other agent.

Additional changes to the Proxy Statement

The section "*Eligibility to Participate in the 2018 Plan*" on page 19 of the Proxy Statement is amended to read as follows:

All eligible individuals are able to participate in the 2018 Plan. Eligible individuals include our directors, officers, employees, independent contractors and consultants, as well as individuals who have accepted an offer of employment from us. As of the date of this proxy statement, five non-employee directors, six executive officers, approximately 65 other employees, and approximately 7 consultants are eligible to receive grants under the 2018 Plan.

Because benefits under the 2018 Plan will require future actions by the Compensation Committee and the fair market value of our common stock at various dates, it is not possible to determine the benefits that will be received by eligible individuals under the 2018 Plan, if any. The securities that are underlying grants of awards under the 2018 Plan is our common stock.

For information on the stock options and restricted stock units outstanding on the Record Date, see the section "**Outstanding Stock Options and Restricted Stock Units**" on page 18 of the Proxy Statement.

On July 31, 2020, the market price of our common stock on the NASDAQ Capital Market was \$4.30 per share.

The following section describing the tax treatment to us and to recipients of grants under the 2018 Plan, entitled "**Material Federal Income Tax Consequences**," is added to the Proxy Statement on Page 22, before the section entitled: "**2014 Stock Incentive Plan**."

Material Federal Income Tax Consequences

The following is a brief description of the principal federal income tax consequences, as of the date of this proxy statement, associated with the grant of awards under the 2018 Plan. This summary is based on our understanding of present United States federal income tax law and regulations. The summary does not purport to be complete or applicable to every specific situation. Furthermore, the following discussion does not address foreign, state or local tax consequences.

Options

Grant. There is generally no United States federal income tax consequence to the participant solely by reason of the grant of incentive stock options or nonqualified stock options under the 2018 Plan, assuming the exercise price of the option is not less than the fair market value of the shares on the date of grant.

Exercise. The exercise of an incentive stock option is not a taxable event for regular federal income tax purposes if certain requirements are satisfied, including the requirement that the participant generally must exercise the incentive stock option no later than three months following the termination of the participant's employment with us. However, such exercise may give rise to alternative minimum tax liability (see "Alternative Minimum Tax" below). Upon the exercise of a nonqualified stock option, the participant will generally recognize ordinary income in an amount equal to the excess of the fair market value of the shares at the time of exercise over the amount paid by the participant as the exercise price. The ordinary income recognized in connection with the exercise by a participant of a nonqualified stock option will be subject to both wage and employment tax withholding, and we generally will be entitled to a corresponding deduction.

The participant's tax basis in the shares acquired pursuant to the exercise of an option will be the amount paid upon exercise plus, in the case of a nonqualified stock option, the amount of ordinary income, if any, recognized by the participant upon exercise thereof.

Qualifying Disposition. If a participant disposes of shares of our common stock acquired upon exercise of an incentive stock option in a taxable transaction, and such disposition occurs more than two years from the date on which the option was granted and more than one year after the date on which the shares were transferred to the participant pursuant to the exercise of the incentive stock option, the participant will realize long-term capital gain or loss equal to the difference between the amount realized upon such disposition and the participant's adjusted basis in such shares (generally the option exercise price).

Disqualifying Disposition. If the participant disposes of shares of our common stock acquired upon the exercise of an incentive stock option (other than in certain tax free transactions) within two years from the date on which the incentive stock option was granted or within one year after the transfer of shares to the participant pursuant to the exercise of the incentive stock option, at the time of disposition the participant will generally recognize ordinary income equal to the lesser of: (i) the excess of each such share's fair market value on the date of

exercise over the exercise price paid by the participant, or (ii) the participant's actual gain. If the total amount realized on a taxable disposition (including return on capital and capital gain) exceeds the fair market value on the date of exercise of the shares of our common stock purchased by the participant under the option, the participant will recognize a capital gain in the amount of the excess. If the participant incurs a loss on the disposition (the total amount realized is less than the exercise price paid by the participant), the loss will be a capital loss.

Other Disposition. If a participant disposes of shares of our common stock acquired upon exercise of a nonqualified stock option in a taxable transaction, the participant will recognize capital gain or loss in an amount equal to the difference between the participant's basis (as discussed above) in the shares sold and the total amount realized upon disposition. Any such capital gain or loss (and any capital gain or loss recognized on a disqualifying disposition of shares of our common stock acquired upon exercise of incentive stock options as discussed above) will be short-term or long-term depending on whether the shares of our common stock were held for more than one year from the date such shares were transferred to the participant.

Alternative Minimum Tax. Alternative minimum tax is payable if and to the extent the amount thereof exceeds the amount of the taxpayer's regular tax liability, and any alternative minimum tax paid generally may be credited against future regular tax liability (but not future alternative minimum tax liability). Alternative minimum tax applies to alternative minimum taxable income. Generally, regular taxable income as adjusted for tax preferences and other items is treated differently under the alternative minimum tax.

For alternative minimum tax purposes, the spread upon exercise of an incentive stock option (but not a nonqualified stock option) will be included in alternative minimum taxable income, and the taxpayer will receive a tax basis equal to the fair market value of the shares of our common stock at such time for subsequent alternative minimum tax purposes. However, if the participant disposes of the incentive stock option shares in the year of exercise, the alternative minimum tax income cannot exceed the gain recognized for regular tax purposes, provided that the disposition meets certain third party requirements for limiting the gain on a disqualifying disposition. If there is a disqualifying disposition in a year other than the year of exercise, the income on the disqualifying disposition is not considered alternative minimum taxable income.

There are no federal income tax consequences to us by reason of the grant of incentive stock options or nonqualified stock options or the exercise of an incentive stock option (other than disqualifying dispositions). At the time the participant recognizes ordinary income from the exercise of a nonqualified stock option, we will be entitled to a federal income tax deduction in the amount of the ordinary income so recognized (as described above), provided that we satisfy our reporting obligations described below. To the extent the participant recognizes ordinary income by reason of a disqualifying disposition of the stock acquired upon exercise of an incentive stock option, and subject to the requirement of reasonableness, the provisions of Section 162(m) of the Code and the satisfaction of a tax reporting obligation, we generally will be entitled to a corresponding deduction in the year in which the disposition occurs. We are required to report to the Internal Revenue Service any ordinary income recognized by any participant by reason of the exercise of a nonqualified stock option. We are required to withhold income and employment taxes (and pay the employer's share of the employment taxes) with respect to ordinary income recognized by the participant upon exercise of nonqualified stock options.

Stock Appreciation Rights

There are generally no tax consequences to the participant or us by reason of the grant of stock appreciation rights. In general, upon exercise of a stock appreciation rights award, the participant will recognize taxable ordinary income equal to the excess of the stock's fair market value on the date of exercise over the stock appreciation rights' base price, or the amount payable. Generally, with respect to employees, we are required to withhold from regular wages or supplemental wage payments an amount based on the ordinary income recognized. Subject to the requirement of reasonableness, the provisions of Section 162(m) of the Code and the satisfaction of a tax reporting obligation, we generally will be entitled to a business expense deduction equal to the taxable ordinary income realized by the participant.

Restricted Stock

Unless a participant makes a Section 83(b) election, as described below, with respect to restricted stock granted under the 2018 Plan, a participant receiving such an award will not recognize U.S. taxable ordinary income and we will not be allowed a deduction at the time such award is granted. While an award remains unvested or otherwise subject to a substantial risk of forfeiture, a participant will recognize compensation income equal to the amount of any dividends received and we will be allowed a deduction in a like amount. When an award vests or otherwise ceases to be subject to a substantial risk of forfeiture, the excess of the fair market value of the award on the date of vesting or the cessation of the substantial risk of forfeiture over the amount paid, if any, by the participant for the award will be ordinary income to the participant and will be claimed as a deduction for federal income tax purposes by us. Upon disposition of the shares received, the gain or loss recognized by the participant will be treated as capital gain or loss, and the capital gain or loss will be short-term or long-term depending upon whether the participant held the shares for more than one year following the vesting or cessation of the substantial risk of forfeiture.

However, by filing a Section 83(b) election with the Internal Revenue Service within 30 days after the date of grant, a participant's ordinary income and commencement of holding period and the deduction will be determined as of the date of grant. In such a case, the amount of ordinary income recognized by such a participant and deductible by us will be equal to the excess of the fair market value of the award as of the date of grant over the amount paid, if any, by the participant for the award. If such election is made and a participant thereafter forfeits his or her award, no refund or deduction will be allowed for the amount previously included in such participant's income.

Generally, with respect to employees, we are required to withhold from regular wages or supplemental wage payments an amount based on the ordinary income recognized. Subject to the requirement of reasonableness, the provisions of Section 162(m) of the Code the satisfaction of a tax reporting obligation and any tax withholding condition, we generally will be entitled to a business expense deduction equal to the taxable ordinary income realized by the recipient. Upon disposition of stock, the recipient will recognize a capital gain or loss equal to the difference between the selling price and the sum of the amount paid for such stock, if any, plus any amount recognized as ordinary income upon acquisition (or vesting) of the stock. Such gain or loss will be long- or short-term depending on whether the stock was held for more than one year from the date ordinary income is measured.

Section 409A

If an award under the 2018 Plan is subject to Section 409A of the Code, but does not comply with the requirements of Section 409A of the Code, the taxable events as described above could apply earlier than described, and could result in the imposition of additional taxes and penalties. Participants are urged to consult with their tax advisors regarding the applicability of Section 409A of the Code to their awards.

Potential Limitation on Company Deductions

Section 162(m) of the Code generally disallows a tax deduction for compensation in excess of \$1 million paid in a taxable year by a publicly held corporation to its chief executive officer and certain other “covered employees”. Our board of directors and Compensation Committee intend to consider the potential impact of Section 162(m) on grants made under the 2018 Plan, but reserve the right to approve grants of options and other awards for an executive officer that exceeds the deduction limit of Section 162(m).

Revoking Your Proxy and Changing Your Vote

If you have already voted your shares and do not wish to change your vote, there is no need to submit another proxy card in response to this Supplement.

If you have already voted or submitted your proxy card, you may revoke it at any time before it is exercised by sending another proxy card with a later date. Please note that if your shares are held in "street name," please consult your broker for instructions on how to revoke your proxy or change your vote.

If you would like additional copies of the proxy card, or if you have questions about the matters to be considered at the Annual Meeting, please contact our Corporate Secretary at the address set forth above.